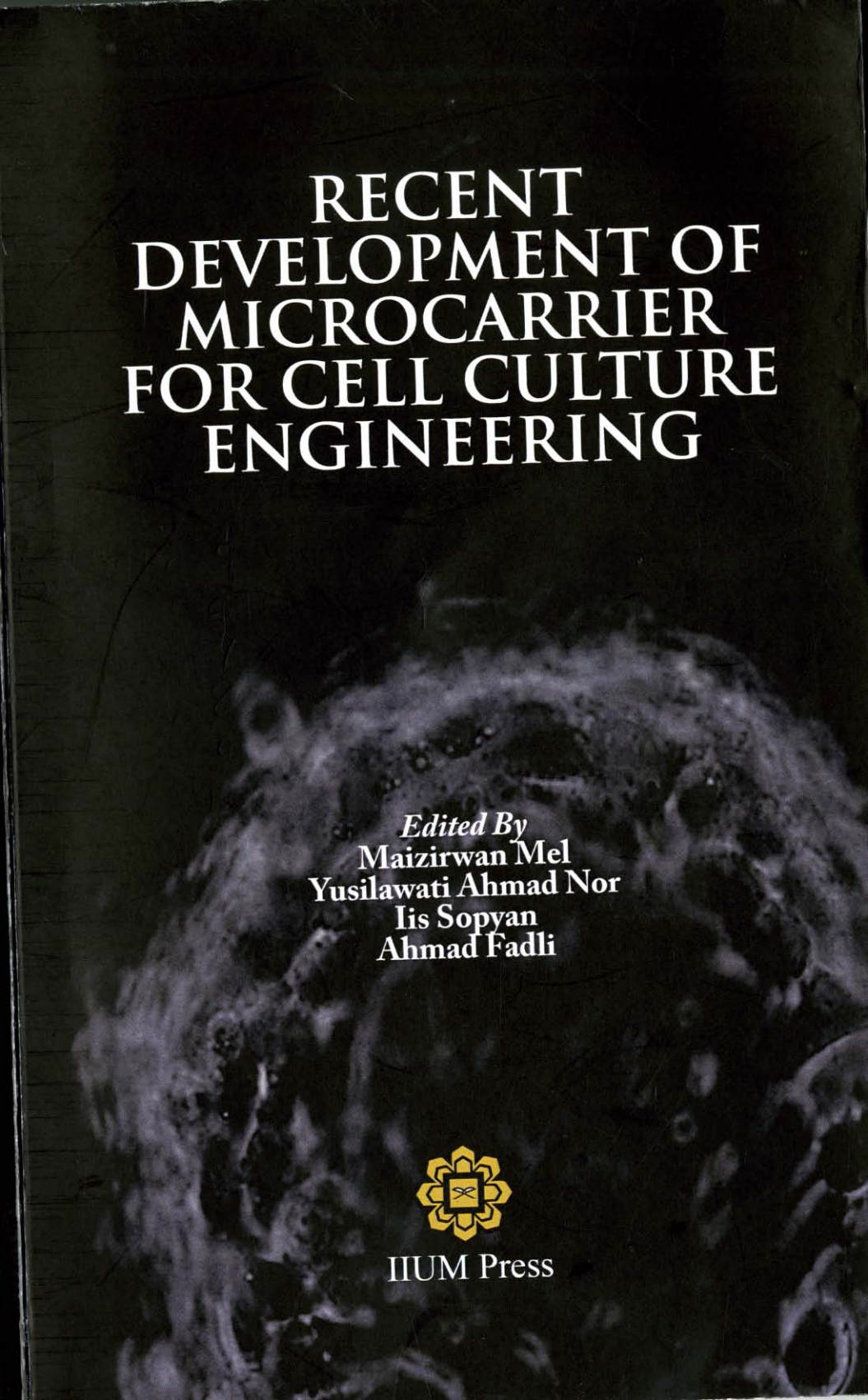
RECENT DEVELOPMENT OF MICROCARRIER FOR CELL CULTURE ENGINEERING



Edited By
Maizirwan Mel
Yusilawati Ahmad Nor
Iis Sopyan
Ahmad Fadli

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Chapter 15

The study of NDV Titer Using Different Cell Lines in T-Flask Culture

Jaafar Nuhu Ja'afar, Maizirwan Mel, Mohd Ismail Abdul Karim, Sharifah Syed Hassan, Aini Ideris

1. Introduction

Newcastle disease (ND) is reported as the most important viral disease of poultry in the world including developing countries (Adene, 1990 and Spradbrow, 1997). It has a devastating effect on commercial as well as village poultry industries (Adene, 1997). ND infects approximately 236 species of pet and free-living birds in addition to domestic avian species (chicken, turkey, goose, duck, and pigeon (Kaleta and Baldauf, 1988). Among poultry, chickens are the most susceptible, whereas ducks and geese are the least susceptible (Wakamatsu *et al.*, 2006). There is no treatment for the disease (OIE, 2000). Prevention is to import birds from disease free flocks only (Alexander, 1992) or through vaccination which must continue throughout the life of the bird (OIE, 2000).

As early as 1913, vaccinia virus (Stinchardt *et al.*, 1913) was grown in cell cultures, and in the 1930s, both smallpox virus (Rivers and Ward, 1935) and yellow fever virus (Lloyd *et al.*, 1936) were propagated in cell cultures for the purpose of vaccine production.